FLOATING BOOM CONTAINMENT GUIDE & COMPOSITE BACKING PLATE SPECIFICATION

SCOPE:

This specification establishes requirements for The U.S. Navy currently upgrading Norfolk Piers and is upgrading the support/fastening systems for the environmental booms utilized at the pier side. The new boom guides will be all composite materials and designed for long life and low maintenance. The guides shall serve to restrict the environmental boom from being pushed under the concrete dock and shall allow the boom to move freely in two directions. It shall allow for installation on 12" wood piles and 12" square concrete piles and allow for installation despite pile irregularity and mounting elevation obstructions.

ITEM 0001 &

DESCRIPTION

The proposed floating boom guides shall be a modern molded electrometric guide system capable of deflecting under load to prevent damage to the guide. The floating boom guides shall provide a guide thru which the environmental boom will be allowed to move freely laterally along the face of the pier as well as vertically during change in tidal/wave action. The minimum internal height of the floating boom guides to be utilized at Pier 15 and 16 shall be 9' – 4" based on a tidal fluctuation of 5' – 6'. The proposed floating boom guides shall be capable of deflecting under load perpendicular to the face without damaging the guide system. It shall be removable for servicing of the environmental boom or floating boom guides by means of stainless steel fasteners which can be handled by on-site personnel. The electrometric material for the proposed CBG to be used must be of castable reinforced polyurethane. It shall be the reaction product solely of 100% Polytetramethylene ether glycol (PTMEG), and aromatic diamine, 2,4 toluene diisocyanate and based urethane Elastomers. The material shall be reinforced with the necessary additives for resistance to aging, seawater, abrasion, and ultraviolet rays. The cast product must be homogenous in quality and free from foreign materials, bubbles, injuries, cracks and other harmful defects. The specified polyurethane shall have excellent hydrolytic stability and be non-water absorbing. It should also display resistance to oil, seawater and extreme temperature.
The embedded fixing plates shall be firmly bonded into the urethane body through the process of casting, and covered with urethane perfectly lest they should be exposed. Embedded plates shall be drilled and threaded as required and shall be 316 Stainless Steel.

MATERIAL PROPERTIES

TEST ITEM		PROPERTIES	TEST METHOD
Before Aging	Tensile Strength	2472 psi min	ASTM D 412
	Elongation	677% min.	
	Hardness	86° max. Shore A	ASTM D 2240
After Aging	Tensile Strength	Not less than 80% of original value.	ASTM D 573
	Elongation		
	Hardness	Original value +8° max.	

Density	70	ASTM D1622
Specific Gravity	1.12	
Tear Strength	448 lbs/in min	ASTM D 470
Flex Life (Ross)	10,000 cycles min	ASTM D 1052
Abrasion Resistance (NBS)	100	ASTM D 1630

MATERIAL VERIFICATION

Sampling

The specimen for testing and inspection of the materials and dimensions shall be sampled as specified below. The specimen to be used for the material test shall be taken directly from the product or from the urethane materials prepared in the quality check and under the condition of the same casting method as the products.

Test Item	Number of Sampling
Material	1 set from the lot of compound for the manufacture of the composite boom guide's.
Dimensions	All composite boom guide's.

Hardware

All hardware for mounting of the floating boom guides shall be supplied by the manufacturer. All hardware for mounting the floating boom guides to the concrete or wood piling including threaded rods, nuts, bolts, washers, drilled pins, and Kevlar straps shall be included with the product. All mounting hardware shall be 316 Stainless Steel.

Design and Construction

The proposed floating boom guides shall be rectangular in shape with bevels at the top and bottom as shown on the manufacturer's drawings. The floating boom guides shall be designed and constructed according to the recommended industry practice for castable urethanes.

Color

The floating boom guides shall be Safety Orange in color. Material color shall be uniform throughout. Top coating will not be accepted.

Hardware

Attachment Straps

Mounting straps shall be Kevlar or Stainless Steel and shall be suitable for marine environments. The strap shall be suitable for installation onto an irregular surface without hindering proper tensioning. The tensioning system shall be designed in order to accept up to a maximum tension force of 10 tons. Other strapping systems which are able to corrode are explicitly NOT ALLOWED.

Fastening Hardware

All fastening hardware for installation of the Kevlar or Stainless Steel straps for attachment of mounting blocks to the main body of the floating boom guides shall be 316 Stainless Steel. 304 Stainless Steel and carbon steel are explicitly NOT ALLOWED.

ITEM 0002 & 0002A

DESCRIPTION

As the floating boom guides's shall be installed at 100' intervals, intermediate backing plates shall be installed at every pile location between floating boom guides. Backing plates shall be designed with the same fastening system as defined above and shall provide a smooth surface facing the environmental boom so as to avoid chafing of the boom against the pile. The backing plate and strapping systems shall be made from the same materials as specified above and be installed on every pile not fitted with a floating boom guides. Overall height of the backing plate shall be 9' – 4".

ITEM 0001A thru 0002A

PRESERVATION, PACKAGING, PACKING & MARKING REQUIREMENTS

The Floating Hazmat Containment Guide to be furnished shall be preserved, packaged and packed in accordance with the contractor's standard practice in a manner to prevent corrosion, deterioration, and damage and to insure arrival at destination in a satisfactory condition. Contractor's Warranty

DOCUMENTATION

The manufacturer shall provide the purchaser with certification that the Floating Hazmat Containment Guide has been inspected as specified in accordance with the MATERIAL VERIFICATION, INSPECTION & TEST RESULTS documentation outlined in the DD FORM 1423-1. The manufacturer shall provide a maintenance manual, in the format of a logbook, where details could be recorded of all maintenance and repairs carried out on the Floating Hazmat Containment Guide. All maintenance and repairs should be carried out in accordance with the manufacturer's guidelines. The manufacturer shall also provide a handling/storage/packing recommendation.

Drawings shall include complete Floating Hazmat Containment Guide system design, but not limited to, detailed system layout, connections to structures, construction and anchoring details, dimensions, and the thickness, grade, and class of material.

MARKING

Each floating boom guide shall have markings on the body to indicate the following information:

Individual serial number
Date manufactured
Full or abbreviated name of manufacturer.

SOURCE SELECTION CRITERIA

LOW COST/ TECHNICALLY ACCEPTABLE EVALUATION

a) The contract resulting from this solicitation will be awarded to that responsible offeror submitting a technically acceptable proposal with the lowest evaluated estimated price.

b) Technical acceptability will be determined in accordance with the following evaluation factors, based on information submitted in response to the provisions entitled "Technical Proposals". To be determined technically acceptable, the offeror must be technically acceptable in each of the areas identified by the following evaluation factors:

1) **CORPORATE EXPERIENCE**
2) **CAPABILITIES**
3) **PAST PERFORMANCE**
4) **DELIVERABLES**

c) Technical Proposals:

Offerors shall provide technical proposals which enable the Government to make a thorough evaluation and arrive at a sound determination as to whether or not the proposal will meet the Government's stated requirements. To this end, each technical proposal shall be as specific, detailed and complete as to dearly and fully demonstrate that the prospective offeror has a thorough knowledge and understanding of the requirements and has the valid and practical solutions for technical problems. Statements which paraphrase the specifications or attest that "standard procedures will be employed", are inadequate to demonstrate how It is proposed to comply with the requirements of the specifications and this clause. As a minimum, the proposal must clearly provide the following:

1. Corporate Experience

A narrative shall be prepared describing the offeror's experience with manufacturing various submarine shore power cable assembly type components similar to those assemblies contained in the listed in scope of work. The offeror shall provide a minimum of three (3) contracts within the past ten (10) years, citing this experience. The offeror shall provide in a matrix format, the contract number, and type of contract, contract dollar value, period of performance, work description / scope of work, and the name of the customer.

2. Capability:

A narrative shall be prepared which demonstrates the offeror's capability to provide equipment and facilities to accomplish the required submarine shore power cable assembly type components and provide qualified personnel meeting the requirements identified under the scope of work. In addition, the offeror shall demonstrate facilities and equipments which possess the following capabilities:

a. Capability of manufacturing floating boom guides and backing plates in accordance with scope of work.

b. Capabilities of testing the floating boom guides and backing plates under this scope of work.

3. Past Performance

a. The offeror shall provide a list of the last two (2) contracts or subcontracts completed during the last three (3) years and contracts currently in process. Contracts listed may include those entered into by the Government, agencies of state and local governments and commercial customers. Offerors shall include the following Information for each contract and sub-contract:

1. Name of customer
2. Contract number
3. Contract Type
4. Total contract value
5. Description of work
6. Contracting Officer! Administrator and telephone number
7. Program Manager and telephone number

b. Each offeror will be evaluated on their performance under existing and prior contracts for similar products or services. Performance Information will be used for both responsibility determinations and as an evaluation factor.

(c) Exceptions:

Offerors are not encouraged to take exceptions to this solicitation; however any exceptions taken to the specifications or terms and conditions of this solicitation shall be explained in detail and set forth in a cover letter. Offerors shall identify the particular section, clause paragraph and page to which they are taking exception.

4. Deliverables

Items to be included with the bid proposal shall include at a minimum the following items:

1. A bill of materials drawing showing the general arrangement of the floating boom guides and backing plates system and noting all included hardware with quantities.
2. A drawing of the complete proposed floating boom guides and backing plates.
3. Material Data sheets showing proposed physical properties in accordance with above specifications.
4. Price for supply of required quantity including all items required to complete and mount the system including all crating and shipping to jobsite
5. Certificate from manufacturer stating that product is manufactured in the USA.

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0003	A	TDP TM OTHER X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
BOOM GUIDES & COMPOSITE BACKING PLATES	TBD	TBD.

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A0001 & A0002	MATERIAL VERIFICATION, INSPECTION & TEST RESULTS	Final Report

4. Authority *(DATA Acquisition document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
	Contractor's Inspection Req.	NAVSEA PHILADELPHIA

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
DD	TBD	ONE/R	See Block 16
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
			See Block 16

16. REMARKS

The Contractor shall submit two (2) draft final reports within **thirty (30)** days after completion of all technical effort under the Statement of Work. The report can be in contractor's format, but must outline all material verifications. For contractor supplied material, the contractor shall supply documented verification of the raw material being utilized under this solicitation.

The Contractor shall submit one (1) draft final reports within **thirty (30)** days after completion of all results of dimensions inspected in accordance with the Statement of Work. The "actual" dimension can be recorded on a copy of the provided drawings under this solicitation.

The Contractor shall submit two (2) draft final reports within **thirty (30)** days after completion of all technical effort under the Statement of Work with the results of the required leak test called out under Drawing 806-5773691, Revision B of this contract.

All records shall be documented on a reproduction of the component containing the following information:

(a) Inspector's Name and Signature
(b) Date of Inspection
(c) Contract Number
(d) Contractor Name
(e) Drawing Number, Revision & Piece Number
(f) Serial Number

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES		
	Draft	Final	
		Reg	Repro
Naval Surface Warfare	2	2	
Carderock Division			
US Naval Business Ctr			
Phila, PA 19112-5083			
Building 4, Code 971			
Attn: Lou DiStefano			
15. TOTAL	2	2	

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
LOUIS J. DISTEFANO	6 JUNE 2006	LOUIS J. DISTEFANO	6 JUNE 2006